

Appl. No. : 09/892,900
Filed : June 26, 2001

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AMENDMENTS TO THE CLAIMS

Please amend the claims as set forth in the following listing of claims, which replaces all prior versions and listings of the claims.

1-13. (Canceled)

14. (Currently Amended) An infusion pump comprising:

a first shell defining a non-planar interior surface;

a second shell removably secured to said first shell;

a platen defining a non-planar surface complementary to said interior surface of said first shell, said platen being positioned between said first and second shells such that said non-planar surface of said platen faces said interior surface of said first shell and defines a variable-volume space therebetween, said space being configured to hold a fluid delivery bag therein;

a spring arranged to bias said platen in a first direction to decrease the volume of said space;

wherein a spring rate and working length of said spring, said platen and said interior surface are configured to compress said fluid delivery bag to expel fluid therefrom when said platen is moving in said first direction and wherein further a total distance of movement of said platen in said first direction is about one fourth of a minimum dimension in a direction perpendicular to said first direction and a working length of said spring is no more than about 41 percent of a free length of said spring such that an outlet pressure of said fluid is substantially constant over substantially the entire dispensation cycle of said infusion pump.

15. (Previously Presented) The infusion pump of Claim 14, wherein said spring is attached to at least one of said second shell and said platen.

16. (Previously Presented) The infusion pump of Claim 14, wherein said first shell is threadably engaged with said second shell.

17. (Previously Presented) The infusion pump of Claim 14, wherein said first and second shells are generally circular in outer shape.

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18. (Canceled)

19. (Currently Amended) An infusion pump comprising:

a first shell defining a non-planar interior surface;
a second shell removably secured to said first shell;

a platen defining a non-planar surface complementary to said interior surface of said first shell, said platen being positioned between said first and second shells such that said non-planar surface of said platen faces said interior surface of said first shell and defines a variable-volume space therebetween, said space being configured to hold a fluid delivery bag therein;

at least one spring arranged to bias said platen in a first direction to decrease the volume of said space;

wherein a spring rate and working length of said at least one spring, said platen and said interior surface are configured to compress said fluid delivery bag to expel fluid therefrom when said platen is moving in said first direction and wherein a total distance of movement of said platen in said first direction is about one fourth of a minimum dimension in a direction perpendicular to said first direction and a working length of said at least one spring is no more than about 41 percent of a free length of said at least one spring such that an outlet pressure of said fluid is substantially constant over substantially the entire dispensation cycle of said infusion pump.

20-22. (Canceled)

23. (Currently Amended) A kit for assembling an infusion pump, comprising:

a first shell defining a non-planar interior surface;
a second shell configured to be removably secured to said first shell;

a platen defining a non-planar surface complementary to said interior surface of said first shell, said platen being sized and shaped to be capable of being positioned between said first and second shells that said non-planar surface of said platen faces said interior surface of said first shell to define a variable-volume space therebetween when so positioned, said space being configured to hold a fluid delivery bag therein; and

at least one spring sized and shaped to be positioned between said second shell and said platen to bias said platen in an infusion direction tending to decrease the volume

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~~of said space and wherein a total distance of movement of said platen in said infusion direction is about one fourth of a minimum dimension in a direction perpendicular to said infusion direction and a working length of said at least one spring is no more than about 41 percent of a free length of said at least one spring~~ a spring rate and working length of said at least one spring, said platen and said interior surface are configured to compress said fluid delivery bag to expel fluid therefrom when said platen is moving in said infusion direction such that an outlet pressure of said fluid is substantially constant over substantially the entire dispensation cycle of said infusion pump.

24. (Previously Presented) The kit of Claim 23, additionally comprising a fluid delivery bag connected to an outlet tube, said fluid delivery bag being sized and shaped to be positioned within said variable-volume space, said at least one spring, said platen and said interior surface configured to compress said fluid delivery bag to expel fluid therefrom through said outlet tube when said platen is moving in said infusion direction.

25-29. (Canceled)

30. (Previously Presented) The infusion pump of Claim 14, wherein each of said platen and said interior surface include a substantially planar central portion and a non-planar annular portion surrounding said central portion.

31-32. (Canceled)

33. (Previously Presented) The infusion pump of Claim 19, wherein each of said platen and said interior surface include a substantially planar central portion and a non-planar annular portion surrounding said central portion.

34-35. (Canceled)

36. (Previously Presented) The kit of Claim 23, wherein each of said platen and said interior surface include a substantially planar central portion and a non-planar annular portion surrounding said central portion.

37. (New) The infusion pump of Claim 14, wherein said outlet pressure does not fluctuate more than 10 percent during said first 90 percent of said dispensation cycle.

38. (New) The infusion pump of Claim 19, wherein said outlet pressure does not fluctuate more than 10 percent during said first 90 percent of said dispensation cycle.

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39. (New) The kit of Claim 23, wherein said outlet pressure does not fluctuate more than 10 percent during said first 90 percent of said dispensation cycle.